

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1-20. Canceled.

21. (New) A communication system, comprising:

a plurality of communication agents in wireless radio communication with one another to form a local wireless communication network, wherein each communication agent is powered from a power grid;

a plurality of communication clients in wireless radio communication with said local wireless communication network, wherein at least one communication client is powered by a portable power source and each communication client performs an additional function other than radio communication; and

a local network controller in said local wireless communication network to control a communication path of a communication signal for each communication client.

22. (New) The system as in claim 21, wherein said local network controller is configured to select a communication path

for a communication client to conserve power of at least one portable power source.

23. (New) The system as in claim 21, further comprising a communication gateway coupled to provide communications between said local wireless communication network and at least one external communication network to allow for communications between a communication client and said at least one external communication network.

24. (New) The system as in claim 23, wherein said communication gateway wirelessly communicates with at least one communication agent in said local communication network.

25. (New) The system as in claim 21, wherein said local network controller resides in a selected communication agent.

26. (New) The system as in claim 21, wherein said local network controller distributes among a plurality of selected communication agents.

27. (New) The system as in claim 21, wherein said local network controller further controls a communication path for a

signal from a communication client to conserve a communication bandwidth used by said communication path.

28. (New) The system as in claim 21, wherein said plurality of communication agents operate collectively to register a new communication client to said local wireless communication network and reconfigure said local wireless communication network when either a communication agent or a communication client is added or removed.

29. (New) The system as in claim 21, further comprising a battery backup connected to a communication agent to supply power when the power grid fails.

30. (New) The system as in claim 21, wherein said local communication network operates based on an IEEE 802.11 standard.

31. (New) The system as in claim 30, wherein said local network controller is configured to select a communication path for a communication client to conserve power of at least one portable power source.

32. (New) The system as in claim 30, further comprising a communication gateway coupled to provide communications between

said local wireless communication network and at least one external communication network to allow for communications between a communication client and said at least one external communication network.

33. (New) The system as in claim 32, wherein said communication gateway wirelessly communicates with at least one communication agent in said local communication network.

34. (New) The system as in claim 30, wherein said local network controller resides in a selected communication agent.

35. (New) The system as in claim 30, wherein said local network controller distributes among a plurality of selected communication agents.

36. (New) The system as in claim 30, wherein said local network controller further controls a communication path for a signal from a communication client to conserve a communication bandwidth used by said communication path.

37. (New) The system as in claim 30, wherein said plurality of communication agents operate collectively to register a new communication client to said local wireless communication

network and reconfigure said local wireless communication network when either a communication agent or a communication client is added or removed.

38. (New) The system as in claim 30, further comprising a battery backup connected to a communication agent to supply power when the power grid fails.

39. (New) The system as in claim 21, wherein said local communication network operates based on a Bluetooth standard.

40. (New) The system as in claim 39, wherein said local network controller is configured to select a communication path for a communication client to conserve power of at least one portable power source.

41. (New) The system as in claim 39, further comprising a communication gateway coupled to provide communications between said local wireless communication network and at least one external communication network to allow for communications between a communication client and said at least one external communication network.

42. (New) The system as in claim 41, wherein said communication gateway wirelessly communicates with at least one communication agent in said local communication network.

43. (New) The system as in claim 39, wherein said local network controller resides in a selected communication agent.

44. (New) The system as in claim 39, wherein said local network controller distributes among a plurality of selected communication agents.

45. (New) The system as in claim 39, wherein said local network controller further controls a communication path for a signal from a communication client to conserve a communication bandwidth used by said communication path.

46. (New) The system as in claim 39, wherein said plurality of communication agents operate collectively to register a new communication client to said local wireless communication network and reconfigure said local wireless communication network when either a communication agent or a communication client is added or removed.

47. (New) The system as in claim 39, further comprising a battery backup connected to a communication agent to supply power when the power grid fails.

48. (New) The system as in claim 21, wherein each of said communication agents and clients is assigned with a unique address to allow for radio communications in said local communication network without separating the radio communications in tiers by radio frequency.

49. (New) The system as in claim 48, wherein a same radio frequency is used for agent-to-agent communications and agent-to-client communications.

50. (New) The system as in claim 48, wherein said local network controller is configured to select a communication path for a communication client to conserve power of at least one portable power source.

51. (New) The system as in claim 48, further comprising a communication gateway coupled to provide communications between said local wireless communication network and at least one external communication network to allow for communications

between a communication client and said at least one external communication network.

52. (New) The system as in claim 51, wherein said communication gateway wirelessly communicates with at least one communication agent in said local communication network.

53. (New) The system as in claim 48, wherein said local network controller resides in a selected communication agent.

54. (New) The system as in claim 48, wherein said local network controller distributes among a plurality of selected communication agents.

55. (New) The system as in claim 48, wherein said local network controller further controls a communication path for a signal from a communication client to conserve a communication bandwidth used by said communication path.

56. (New) The system as in claim 48, wherein said plurality of communication agents operate collectively to register a new communication client to said local wireless communication network and reconfigure said local wireless communication

network when either a communication agent or a communication client is added or removed.

57. (New) The system as in claim 48, further comprising a battery backup connected to a communication agent to supply power when the power grid fails.

58. (New) The system as in claim 48, wherein each of said communication agents and clients is assigned with a unique address to allow for radio communications in said local communication network without separating the radio communications in tiers by time.

59. (New) The system as in claim 58, wherein said local network controller is configured to select a communication path for a communication client to conserve power of at least one portable power source.

60. (New) The system as in claim 58, further comprising a communication gateway coupled to provide communications between said local wireless communication network and at least one external communication network to allow for communications between a communication client and said at least one external communication network.

61. (New) The system as in claim 60, wherein said communication gateway wirelessly communicates with at least one communication agent in said local communication network.

62. (New) The system as in claim 58, wherein said local network controller resides in a selected communication agent.

63. (New) The system as in claim 58, wherein said local network controller distributes among a plurality of selected communication agents.

64. (New) The system as in claim 58, wherein said local network controller further controls a communication path for a signal

from a communication client to conserve a communication bandwidth used by said communication path.

65. (New) The system as in claim 58, wherein said plurality of communication agents operate collectively to register a new communication client to said local wireless communication network and reconfigure said local wireless communication network when either a communication agent or a communication client is added or removed.

66. (New) The system as in claim 58, further comprising a battery backup connected to a communication agent to supply power when the power grid fails.

67. (New) The system as in claim 21, wherein each of said communication agents and clients is assigned with a unique address to allow for radio communications associated with said local communication network without separating the radio communications in tiers by code division.

68. (New) The system as in claim 67, wherein said local network controller is configured to select a communication path for a communication client to conserve power of at least one portable power source.

69. (New) The system as in claim 67, further comprising a communication gateway coupled to provide communications between said local wireless communication network and at least one external communication network to allow for communications between a communication client and said at least one external communication network.

70. (New) The system as in claim 69, wherein said communication gateway wirelessly communicates with at least one communication agent in said local communication network.

71. (New) The system as in claim 67, wherein said local network controller resides in a selected communication agent.

72. (New) The system as in claim 67, wherein said local network controller distributes among a plurality of selected communication agents.

73. (New) The system as in claim 67, wherein said local network controller further controls a communication path for a signal from a communication client to conserve a communication bandwidth used by said communication path.

74. (New) The system as in claim 67, wherein said plurality of communication agents operate collectively to register a new communication client to said local wireless communication network and reconfigure said local wireless communication network when either a communication agent or a communication client is added or removed.

75. (New) The system as in claim 67, further comprising a battery backup connected to a communication agent to supply power when the power grid fails.

76. (New) The system as in claim 21, wherein at least one of said plurality of communication clients is powered by the power grid.

77. (New) A method, comprising:
providing a plurality of communication agents distributed at a locale to wirelessly radio communicate with one another in a self-organized manner to form a local wireless communication network which reconfigures when a communication agent is removed or added, wherein each communication agent is powered from a power grid;

connecting said local wireless communication network to an external communication network;

providing a plurality of communication clients to wirelessly radio communicate with and to register in said local wireless communication network as a part of said local wireless communication network such that each communication client is operable to communicate with another communication client and to access the external communication network, wherein each

communication client performs an additional function other than radio communication; and

selecting a communication path of a communication signal for a communication client in said local wireless communication network according to a configuration of said local wireless communication network at time of communication.

78. (New) The method as in claim 77, wherein at least one of said communication clients is powered by a portable power source, and wherein a communication path for a communication client is selected to reduce the use of power of at least one portable power source.

79. (New) The method as in claim 77, wherein said communication path is selected to reduce a number of hops in said local wireless communication network.

80. (New) The method as in claim 77, further comprising using different communication tiers for wireless communications between two communication agents and for wireless communications between a communication agent and a communication client.

81. (New) The method as in claim 80, wherein at least one of said communication clients is powered by a portable power

source, and wherein a communication path for said at least one communication client is selected to reduce the use of the power of the portable power source.

82. (New) The method as in claim 80, wherein said communication path is selected to reduce a number of hops in said local wireless communication network.

83. (New) The method as in claim 77, further comprising assigning each of said communication agents and clients with a unique address in said local wireless communication network to allow for use of a common radio frequency for all communication signals in said local wireless communication network.

84. (New) The method as in claim 83, wherein at least one of said communication clients is powered by a portable power source, and wherein a communication path for said at least one communication client is selected to reduce the use of the power of the portable power source.

85. (New) The method as in claim 83, wherein said communication path is selected to reduce a number of hops in said local wireless communication network.

86. (New) A communication system, comprising:

a plurality of communication agents in wireless radio communication with one another, wherein each communication agent is powered from a power source of a first type;

a plurality of communication clients operable to at least wirelessly radio communicate with said communication agents to form a local wireless communication network of said communication agents and clients, wherein at least one communication client is powered by a power source of a second type which is relatively depletable with respect to said power source of said first type, wherein each communication client performs an additional function other than radio communication; and

a local network controller in said local wireless communication network to control a communication path of a communication signal for said at least one communication client.

87. (New) The system as in claim 86, wherein said local network controller controls a communication path for a communication client to conserve power consumed by at least one power source of said second type.

88. (New) The system as in claim 86, wherein said local network controller controls said communication path to reduce a number of hops in said local wireless communication network.

89. (New) The system as in claim 86, wherein said communication agents collectively reconfigure said local wireless communication network to maintain communications when a communication agent or client is removed or added.

90. (New) The system as in claim 89, wherein said local network controller controls a communication path for said at least one communication client powered by said power source of said second type to conserve power.

91. (New) The system as in claim 89, wherein said local network controller controls said communication path to reduce a number of hops in said local wireless communication network.

92. (New) The system as in claim 86, wherein said power source of said first type includes a power grid and said power source of said second type includes a portable battery.

93. (New) The system as in claim 86, wherein one of said communication clients is selected from a group consisting of:

telephones;
televisions;
computers;
keypad controllers;
burglar alarms; and
appliances.

94. (New) The system as in claim 86, wherein at least one communication client is powered from said power source of said first type as said communication agents.